



**MONTGOMERY COUNTY FIRE AND RESCUE SERVICE  
DRIVER/OPERATOR TRAINING PROGRAM**

## Practical Application Guide Sheet

Engine: Drafting/Fill Site

**Candidate Performance Competency:** The driver candidate shall set up a fill site at a static water source.

- Candidate will display proficiency in obtaining and maintaining a draft from a static water source with the primer system on the apparatus at the time of the test. In the case of the Air Primer system, for testing purposes the candidate will be requested to utilize both the auto and manual features of the system.
- The candidate will explain the operation of other types of primer systems found on other MCFRS pumping apparatus.
- The candidate will set up a two-position fill site capable of filling apparatus at a minimum rate of 1000gpm. When both positions are connected to apparatus the operator will direct water flow to one position at a time to minimize fill time.

Task	Value	Score
1. Candidate will verbalize desirable drafting/fill site characteristics. <ul style="list-style-type: none"> <li>• adequate water depth and volume</li> <li>• proximity of stable apparatus position</li> <li>• lift height &lt;20'</li> <li>• access and egress for tankers</li> </ul>	5	
2. Candidate will verbalize how they would identify a pre-planned draft site in the absence of direction by the first due Engine or Incident Command.	3	
3. Position Engine and apply parking brake.	3	
4. Place wheel chock on downhill side of front or rear tire. <b>(CFP)</b>	3	
5. Remove adapters or caps from drafting intake. Ensure intake screen is intact and properly mounted. <b>(CFP)</b> <ul style="list-style-type: none"> <li>• Driver's side MIV is preferred for ease of monitoring.</li> </ul>	3	
6. Assemble intake hose and appliances. <ul style="list-style-type: none"> <li>a) Remove sufficient hard sleeves to reach the water source.</li> <li>b) Select the proper strainer for type of water source. <b>(CFP)</b></li> <li>c) Assemble hard sleeves and strainer checking for gaskets; connect to desired intake.</li> <li>d) Ensure all connections are tight to reduce or eliminate air leakage.</li> <li>e) Attach rope to strainer.</li> <li>f) Position the hard sleeve and strainer into the water source.</li> <li>g) Ensure strainer is clear of debris and in water of sufficient depth.</li> </ul>	10	

Task	Value	Score
7. Ensure all unused intakes and discharges are closed and capped.	3	
8. Establish a means to continuously circulate water to maintain draft and cool the pump. <b>(CFP)</b> <ul style="list-style-type: none"> <li>• Place a hoseline on a discharge and dump water back into the source</li> <li>• Flow the deck gun into the water source</li> </ul>	6	
9. Establish two fill positions using a gated LDH manifold and 4" supply line.	5	
10. Engage pump. Look and listen for signs of proper engagement.	1	
11. Close the Tank Fill and Tank to Pump valves. <b>(CFP)</b>	2	
12. Open TPM to adequate pressure. <b>(CFP)</b>	2	
13. Ensure all bleeders/drains are closed.	3	
14. Close pump and engine cooler. <b>(CFP)</b>	3	
15. Ensure onboard foam systems are turned off. <b>(CFP)</b>	2	
16. Candidate will demonstrate use of the priming system on their apparatus. Candidate will describe the use of the priming system found on other MCFRS apparatus. <b>(CFP)</b>		
<u>Air Primer Equipped Pumps</u> <ol style="list-style-type: none"> <li>a) Ensure main pump primer is in "Auto" mode</li> <li>b) Throttle up to 1000rpm</li> <li>c) Engage manual primer for chosen MIV to suction water up to closed MIV</li> <li>d) Open chosen MIV and Auto primer should engage; manual primer may be disengaged once draft is obtained</li> <li>e) Adjust throttle to generate 50 to 100psi discharge pressure</li> <li>f) Open discharge to pre-established circulating method</li> </ol> <p>OR</p> <u>Rotary Vane Equipped Pumps</u> <ol style="list-style-type: none"> <li>a) Position 4-Way priming valve to select MIV with hard sleeves attached</li> <li>b) Throttle up to 1100rpm</li> <li>c) Engage primer to suction water up to closed MIV. Primer must be engaged for no longer than 45 seconds.</li> <li>d) In very rapid succession, open MIV, adjust throttle to generate 50 to 100psi discharge pressure, disengage primer, and open pre-established circulating method</li> </ol>	10	
17. If no pressure can be generated, troubleshoot and return to step 16 to attempt another draft. <b>(CFP)</b>	5	
18. Open discharge to supply LDH manifold.	1	

Task	Value	Score
19. Verify proper supply pressure with tanker driver. This must be done prior to opening the manifold to supply a tanker. Normally 35psi to fill tanker. <b>(CFP)</b>	3	
20. Adjust TPM to appropriate pressure. <b>(CFP)</b>	2	
21. Adjust throttle to provide necessary pump discharge pressure. Discharge Pressure: _____ psi	5	
22. Monitor pump panel, pump, engine compartment gauges and radio.	3	
23. Candidate will verbalize the typical causes and remedies associated with an increased vacuum reading or a weak vacuum reading.	5	
<b>Return to Service</b>		
24. In addition to routine shutdown tasks, open "Master Drain" to drain pump completely	3	
25. With "Master Drain" open, open "Tank to Pump" valve to refill pump with tank water. Close "Master Drain" once water is steadily flowing from the drain to aid with flushing out contaminants and air. <b>(CFP)</b>	3	
26. Complete a backflush of the pump with clean water as soon as possible.	1	
27. Ensure Engine is ready to return to service.	5	
<b>Total Points</b>	100	

## **Critical Fail Points**

*Failure to successfully perform any of the following components will result in an automatic failure of this evolution regardless of total score.*

- a) Failure to use wheel chock, engage the parking brake, or otherwise safely park the vehicle
- b) Failure to close auxiliary coolers or Tank Fill
- c) Failure to turn off onboard foam systems
- d) Activation of TRV
- e) Failure to establish means of circulating water
- f) Mismatched strainer with water source
- g) Failure to achieve and maintain a draft after reasonable attempts
- h) Drafting without intake screen
- i) Failure to manage TPM at any stage of the evolution

- j) Failure to identify proper tanker fill pressure
- k) Failure to refill pump after draining

**Evaluator: Initial beside the final outcome of the exam below.**

\_\_\_\_ PASS    \_\_\_\_ FAIL – Overall Points    \_\_\_\_ FAIL – Critical Failure Point

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**Evaluator Name**

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**Date**

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**Evaluator Signature**